

| Trial | Angle  | S <sub>o</sub> | Dist    | Times <span>Block 2</span> |      |      |      |      |      |
|-------|--------|----------------|---------|----------------------------|------|------|------|------|------|
| 1     | 31.17° | 37.75          | 62.5'   | 2.06                       | 2.40 | 2.25 | 2.19 | 2.54 |      |
| 2     | 31.17° | 37.75          | 75.25'  | 2.44                       | 2.64 | 2.22 | 2.31 | 2.30 | 2.38 |
| 3     | 32.35° | 45.25          | 76.91'  | 2.28                       | 2.18 | 2.15 | 2.22 | 2.47 |      |
| 4     | 32.35° | 45.25          | 61.66'  | 2.16                       | 2.07 | 2.18 | 2.20 | 1.93 |      |
| 5     | 26.33° | 37.125         | 106.25' | 2.37                       | 2.37 | 2.44 | 2.10 | 2.28 | 2.41 |
| 6     | 26.33° | 37.125         | 109.66' | 2.16                       | 2.10 | 2.03 | 2.46 | 2.50 | 2.63 |

| Trial | Angle        | $S_0$    | Dist traveled | Times | Block 3 |
|-------|--------------|----------|---------------|-------|---------|
| 1     | $31.2^\circ$ | $43''$   | $52.75'$      | 1.932 |         |
| 2     | $31.2^\circ$ | $43''$   | $46.25'$      | 1.712 |         |
| 3     | $33.3^\circ$ | $45''$   | $94.5'$       | 3.4   |         |
| 4     | $33.3^\circ$ | $45''$   | $90.5'$       | 2.934 |         |
| 5     | $26.8^\circ$ | $38.5''$ | $77.5'$       | 2.413 |         |
| 6     | $26.8^\circ$ | $38.5''$ | $84'$         | 2.62  |         |
|       |              |          |               |       |         |

HW

- Come up w/ an equation to model data
- Hit inside a 3 ft diameter hula hoop from 60 feet.
- Hit a target on the goal post, 10 ft. off the ground, from a distance of 30 feet.

$$h(t) = -16t^2 + V_0t + S_0$$

height at time  $t$       gravity      time      initial velocity      initial height